Monitoring Coding Compliance

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Coding compliance refers to the process of insuring that the coding of diagnoses and procedures complies with all coding rules and guidelines. Detection, correction, prevention, verification and comparison constitute the five essential components of coding compliance. This article will examine the operational issues associated with each of these five components of coding compliance. Alternative workflows and issues related to the computerization of the coding compliance function will be discussed.

The implementation of a comprehensive compliance program requires the participation of many hospital departments including medical records, billing, admitting, finance, and legal.[1] A critical component of any compliance program is coding compliance. For inpatient care, coding compliance relates to the accuracy and completeness of the ICD-9-CM diagnosis and procedure codes used to assign the DRGs and determine payment.

Coding errors that are determined to represent a fraudulent claim can be subject to penalties that include a base fine plus three times the amount of the claim.[2] Thus, there can be substantial financial consequences associated with coding compliance for the healthcare organization. For example, suppose the claim coded in Figure 1 were submitted for payment. This claim would be assigned to DRG 483 (Tracheostomy except for face, mouth and neck diagnoses) with a payment weight of 16.3395. Clearly, the traumatic injury that necessitated the hospital admission was the complicated open wound of the larynx and trachea and not the closed rib fracture. If the complicated open wound of the larynx and trachea was the principal diagnosis, the DRG would change to DRG 482 (Tracheostomy for face, mouth and neck diagnoses) with a payment weight of 3.6031. The original coding of the claim results in a higher payment weight because the DRG logic assumes that the tracheostomy is being performed on a patient who is in respiratory failure and needs long term mechanical ventilation, as opposed to treatment of the open wound of the larynx and trachea. The payment amount associated with the claim as originally coded would be approximately $75,000. If this claim was determined to be fraudulent, the penalty would be a base fine in the range of $5,000 to $10,000, plus an additional fine of three times the amount of the claim (approximately $230,000). Thus, this single coding error could have substantial financial con-

Principal Diagnosis:	80701	Facture one rib-closed
Secondary Diagnosis:	87410	Open wound larynx with trachea, complicated
Procedure:	311	Temporary tracheostomy

Figure 1: Example of a claim with a probable coding compliance problem

sequences.

Suppose the erroneous coding in this example was simply an honest mistake and there was no intent to submit a fraudulent bill. The Department of Justice (DOJ) stated that it is not its policy to assess fines and penalties for honest billing mistakes.[3] However, DOJ has also stated that hospitals must establish adequate internal procedures to ensure the accuracy of claim submissions. Failure to establish such procedures represents a disregard for the requirements of the law and can turn an honest billing mistake into a false claim that is subject to penalties. Intent to defraud is not required for a claim to be considered a false claim.[4] The lack of adequate safeguards can turn any coding error into a false claim. Ignorance of the law is not a defense against a false claim. Because some ambiguity exists in determining the precise circumstances under which an honest mistake becomes a false claim, the best policy is to assume that when it comes to coding compliance, there are no honest mistakes.

Components of a Coding Compliance Program

A coding compliance program to ensure that the claims submitted to Medicare are accurate and complete should encompass five essential components:

Detection—identifying records with potential coding compliance problems

Correction—performing chart audits and making necessary corrections

Prevention—educating coders in order to prevent coding compliance problems from occurring in the future

Verification—providing an audit trail of all coding compliance actions

Comparison—comparing coding patterns over time and to external norms

A comprehensive coding compliance program must address all five of these components. Computer technology can greatly facilitate the implementation of these five essential components of coding compliance. Computerized encoders and computerized medical records management systems are now common place in medical records departments. The following discussion of each of these components will focus on inpatient coding and will assume that computer systems are available to facilitate the coding compliance program's implementation.

Detection

The detection of potential coding compliance problems requires ongoing monitoring of coding for accuracy and completeness. One way to monitor coding compliance is to perform a random chart audit on a sample of records. While such a process can detect the existence of some coding compliance problems, it is very limited and highly inefficient. The risk of a coding compliance problem can vary greatly depending on the patient's condition. For example, records for patients admitted for routine elective surgery have a relatively low risk of a coding compliance problem, while patients with multiple surgical procedures pose a higher risk for problems. Furthermore, chart audits are labor intensive. Since most hospitals have limited resources available for chart audits, the monitoring of coding compliance must result in a precise identification of records that require a chart audit. Computer systems can provide the means of monitoring 100 percent of all records for coding accuracy and completeness. A computerized audit should evaluate all records for coding

compliance along three dimensions:

Coding—the coded diagnoses and procedures are evaluated to ensure that they adhere to all *Coding Clinic* guidelines and ICD-9-CM coding rules

Clinical—the diagnoses, procedures, age, sex, and discharge status of the patient are evaluated to ensure clinical consistency. For example, all procedures should be reviewed to insure that there is a diagnosis present to justify the procedure

Resource—the length of stay and charges are evaluated to ensure that they are consistent with the patient's condition. For example, a patient with an acute myocardial infarction (AMI) discharged alive with a one-day length of stay has a high probability of having a coding compliance problem

When the computerized audit is performed, a text description of any potential coding compliance problems (i.e., a worksheet) should be generated for each record. As a result there are limited resources for chart audits, the computerized audit should prioritize the records identified for review. Records with potential errors that are likely to impact DRG assignment should be given a higher priority than records with potential errors that are unlikely to impact DRG assignment. Such a prioritization will allow an efficient scheduling of the limited resources available for chart audits.

The evaluation of records from coding, clinical, and resource perspectives should minimize false positives. Records identified with potential coding compliance problems should have a high probability of requiring a coding change. If a large percentage of records identified as having coding compliance problems do not require any code changes upon review, the coding compliance review would be highly inefficient. Further, many false positives will cause coders to lose confidence in the system. Conversely, the system should also minimize false negatives. The majority of significant coding compliance problems must be detected during the computerized audit. Otherwise, the computerized audit will not be effective in avoiding coding compliance problems.

The high visibility associated with the penalties and legal consequences of a coding compliance problem may be causing "defensive" coding in which coding is so conservative that hospitals are losing revenue to which they are legitimately entitled. A 100 percent computerized coding compliance audit can give coders greater confidence in their coding decisions since every record will be audited. Thus, the tendency to code defensively may be reduced.

Finally, while a coding compliance system must evaluate records from a coding, clinical, and resource perspective, no system can address all the unique coding compliance issues that may be present in a particular hospital. Thus, the computerized coding compliance audit must allow users to extend the system by entering their own coding compliance criteria. The user-defined coding compliance criteria should automatically be evaluated during every computerized audit with the results displayed on the coding compliance worksheet. This capability would permit each hospital to adapt the computerized audit to its unique situation.

Correction

A computerized audit can only identify records with inconsistencies that raise suspicion that there are coding compliance problems. The coding on a claim can

not automatically be changed by a computerized audit. Coding changes can only be made through a review by an HIM professional. Thus, once a record has been identified in a computerized audit as having a potential coding compliance problem, the next step is to review the record through a chart audit. These coding compliance chart audits should be performed prior to billing, as failure to do so before billing can result in an excessive number of resubmissions. Resubmissions should be avoided since they are highly visible and may trigger expanded external audits by government agencies. Conversely, delays in billing are costly and must also be avoided. Thus, it is critical that the chart audit correction process be performed in a highly targeted, timely manner.

The emphasis of both the computerized audit and the correction process should be on correct coding—as opposed to an exclusive focus on over-coding. Although over-coding receives all the attention, any miscoding is a coding compliance problem, even a coding error that results in less revenue for the hospital. Furthermore, while it is critical to avoid payment-related coding compliance problems, coded data is used for many other purposes besides payment. For example, in many states, comparisons of hospital performance in terms of resource use and outcomes are publicly disseminated (often referred to as provider report cards). Most provider comparisons are performed on a severity adjusted basis. The severity adjustment often includes detailed distinctions based on the presence of specific combinations of comorbid conditions. Thus, severity adjustment tends to demand a greater level of coding completeness and accuracy than is necessary for payment. Poor performance on a mortality comparison as a result of an inaccurate severity adjustment (due to under-coding) can have a substantial negative financial impact on the hospital, as negative publicity may encourage patients to avoid the hospital, thus reducing the hospital's patient volume.

Prevention

During the computerized audit, worksheets are produced for records with potential coding compliance problems. These worksheets should contain a clear text description of the nature of the potential coding compliance problems and suggestions for possible recoding of the record. Relevant *Coding Clinic* references or ICD-9-CM coding rules should be clearly identified. Such information on the coding compliance worksheet will make the chart audit more targeted and efficient. Further, it will educate coders on the source of potential coding compliance problems, preventing future occurrence of coding compliance problems. Figure 2 illustrates the type of coding compliance

Principal Diagnosis	5119	Unspecified pleural effusion
Secondary Diagnosis	4280	Congestive heart failure
Procedure	9671	Cont mech vent <96 hrs
Discharge status	01	Home, self care
DRG	475	Respiratory system diagnosis with ventilator support
LOS	2 Days	
Payment weight:	3.7291	

Figure 2: Example of a record with potential coding compliance problems

problem identification and suggested recoding that should be present on a coding compliance worksheet. This record has potential coding compliance problems relating to coding, clinical and resource issues.

Coding—the diagnosis 5119 (unspecified pleural effusion) should not be coded as principal diagnosis when diagnosis 4280 (congestive heart failure) is present. Code 4280 (congestive heart failure) should be coded as the principal diagnosis (*Coding Clinic*, Third Quarter 1991)

Clinical—the procedure 9671 (continuous mechanical ventilation <96 hours) is not usually performed for any of the diagnoses. Confirm the procedure or add the diagnosis for which the procedure was performed

Resource—the LOS is unusually short for the procedure 9671 (continuous mechanical ventilation <96 hours)

The above three messages should appear on the coding compliance worksheet. The 1991 third quarter *Coding Clinic* states that when the underlying cause of pleural effusion is congestive heart failure, the congestive heart failure should be coded as principal diagnosis. Congestive heart failure in and of itself is not a sufficient justification for continuous mechanical ventilation. The vast majority of congestive heart failure patients never have continuous mechanical ventilation performed. But because the patient had continuous mechanical ventilation, it is likely that the he or she also had respiratory failure. Therefore, the respiratory failure (code 51881) should be coded as a secondary diagnosis. The two-day length of stay would be highly unusual for a patient on continuous mechanical ventilation, so the procedure and length of stay should be confirmed.

Based on the guidance from the messages on the coding compliance worksheet, Figure 3 shows the probable recoding of the record that will result from a chart audit. The principal diagnosis is changed to congestive heart failure and the pleural effusion is a secondary diagnosis. Respiratory failure is added as a secondary diagnosis. The recoding of the record changes the DRG from 475 (respiratory system diagnosis with ventilator support) to DRG 127 (congestive heart failure) with an associated change in payment weight from 3.7291 to 1.0199. While the addition of the secondary diagnosis of respiratory failure did not influence the DRG assignment, in this case, the addition of the respiratory failure secondary diagnosis could have a substantial impact on the severity assigned to the patient. Failure to code the respiratory failure could result in the assignment of an inappropri-

Principal Diagnosis	4280	Congestive heart failure
Secondary Diagnoses	5119	Unspecified pleural effusion
	51881	Respiratory failure
Procedure	9671	Cont mech vent <96 hrs
Discharge status	01	Home, self care
DRG	127	Congestive heart failure
LOS	2 Days	
Payment weight:	1.0199	

Figure 3: Example recoded record

ately low severity level for the patient, which could negatively impact the hospital's performance on publicly disseminated comparative reports.

Verification

A coding compliance program that includes only detection, correction and prevention does not constitute a comprehensive coding compliance program. A verification that the detection, correction and prevention functions are being actively performed is necessary. Thus, a detailed audit trail of all code changes and coding compliance-related actions must be maintained for verification. In the context of a coding compliance system, this means that three complete sets of codes for each admission should be maintained within the coding compliance database.

Original version—the final set of codes assigned prior to the first computerized audit

Billed version—the final set of codes at the time of the initial bill, reflecting any code changes made after computerized audit and any chart audit

Post-billed version—the final set of codes after claim submission, reflecting internal or external audits, fiscal intermediary adjudication and any other reasons for rebilling

By maintaining all three versions of the codes, the hospital can reduce reports documenting the results of coding compliance activities. The coding compliance database should also maintain a record of the nature of all code changes (e.g., missing secondary diagnosis) and the reason the code changes were necessary (e.g., insufficient physician documentation, coder error). Such detail in the coding compliance database makes it easier to identify patterns in coding compliance problems and take corrective action.

Comparison

The focus of the detection, correction, prevention, and verification functions is introspective— they represent an internal evaluation of coding compliance. The comparison function provides a benchmark to external coding norms. It allows a hospital to determine how its coding practices compare to the coding practices of other hospitals. Figure 4 is an example of a coding compliance benchmark comparison report. AMI, angina, and chest pain represent an acute cardiac cluster of three clinically-related sets of diagnoses. Figure 4 shows the percentage of Medicare medical admissions with AMI, angina, and chest pain within the acute cardiac cluster in a hospital in 1997 and 1998 and in national data (each column totals to 100 percent). As shown in Figure 4, the percent of admissions in the hospital with an AMI within the acute cardiac cluster increased between 1997 and 1998, from 58.2 percent to 60.1 percent. This percentage is much higher than the national data (48.9 percent). The statistical test of significance (the P-value) in Figure 4 shows that the distribution of admissions in the acute cardiac cluster in the hospital is significantly different statistically than the national distribution in both years. The comparison in Figure 4 suggests that the hospital may be over-coding AMIs. However, this evidence is merely suggestive, it is by no means conclusive. It does indicate that the hospital should review its coding of AMIs to ensure that a coding compliance problem does not exist.

Acute Cardiac DRG Cluster Comparison			
DRG	**Hospital 1997**	**Hospital 1998**	**National**
AMI	58.2%	60.1%	48.9%
Angina	18.6%	16.9%	22.4%
Chest Pain	23.2%	23.0%	28.7%
Test of Significance	P(<0.05)	P(<.01)	

Figure 4: Example of coding compliance benchmark comparison report

Integrating a Coding Compliance System into the Medical Records Department

For a coding compliance system to be efficient and effective, it must become part of the normal workflow of the medical records department. The integration of a coding compliance system into the medical records department requires choosing between two alternative workflows:

- Coding compliance performed by the coder as the record is being coded
- Coding compliance performed independently by an internal or external auditor

These two workflows represent radically different approaches to coding compliance. The choice between these two workflows impacts virtually every aspect of the coding compliance process, and each workflow setting has its own advantages and disadvantages.

Coding Compliance Performed by the Coder

A workflow in which coding compliance is performed by the coder would occur as follows:

- The coder completes the initial coding of the record
- The set of codes, as originally assigned by the coder, is stored in the coding compliance system database
- A coding compliance worksheet is generated, identifying any potential coding compliance problems
- The coder makes any necessary coding changes based on guidance from the messages on the coding compliance worksheet
- The coding supervisor or auditor reviews the record if the coder cannot resolve all coding compliance issues identified on the worksheet
- The completed set of codes assigned after the coding compliance review is sent to billing and stored in the coding compliance system database

In this workflow, the coding compliance system must maintain copies of the set of codes as originally assigned and as assigned after the coding compliance audit. Maintaining versions of the codes at both points in time is essential in order to maintain the audit trail of coding compliance actions necessary for verification that there is an active coding compliance program. The advantages of having the coding compliance functions performed by the coder are:

- The chart is available
- The coder is familiar with the chart
- The coder receives immediate educational feedback
- Billing delays are minimized
- The need for independent auditing resources is reduced
- The emphasis is on prevention

The disadvantages of having the coding compliance performed by the coder are:

- The coding compliance review is less independent
- Coding productivity is reduced since coders are performing both the coding and coding compliance functions

Coding Compliance Performed by an Independent Auditor

A workflow in which coding compliance is performed by an independent auditor—internal or external—would occur as follows:

- The coder completes the initial coding of the record
- A set of codes, as originally assigned, is stored in the coding compliance system database
- Coding compliance worksheets are generated as coding is completed (or on a batch) basis and sent to the independent auditor
- The independent auditor makes any necessary coding changes based on the coding compliance worksheets
- A set of codes, as assigned by the independent auditor, is sent to billing and is stored in the coding compliance system database

The advantages of having the coding compliance performed by an independent auditor are:

- Coder productivity is maintained
- Coding compliance review is independent

The disadvantages of having the coding compliance function performed by an independent auditor are:

- Charts may not be readily available
- The auditor is not familiar with the chart
- There is less direct feedback to the coder
- Billing delays may occur
- Substantial independent auditing resources are required
- The emphasis is on detection

Choosing one of these two distinct workflows is a key decision in the implementation of a coding compliance program. The fundamental difference between the two workflows is the distinction between detection and prevention. The emphasis of an independent audit is on the detection of coder errors. The emphasis of a computer-assisted coder self-audit is on coder education through immediate feedback. Thus, the computer-assisted coder self-audit emphasizes prevention through education.

Technical Challenges

The implementation of any computer system always creates certain technical challenges. For a coding compliance system, the technical challenges relate primarily to the interface between the coding compliance system and the encoder and abstracting system used in the hospital. If the workflow utilized is based on a computer-assisted coder self-audit, there must be a seamless interface between the coding compliance system and the encoder software. The coding compliance worksheets must be able to be generated at any time during an encoder session. When a coder is using the coding compliance worksheet, she or he may recode and regenerate worksheets several times in rapid succession until coding of the record is finalized. Thus, a smooth transition between the encoder and coding compliance software is essential. In an independent audit workflow, the abstracting system and coding compliance system must interface. The abstract system must pass completed records (usually in batch) to the coding compliance system in order

to have coding compliance worksheets generated. The abstract system must also pass the records as coded to the coding compliance system in order to create a complete audit trail. In either workflow, the abstract system must communicate to the coding compliance system when the record has been sent to billing in order to ensure accuracy of the audit trail. In general, close data coordination between the abstract system and coding compliance system is necessary to ensure the consistency between the two systems of coded data.

Essential Features of a Coding Compliance System

This discussion has identified a series of features that should be present in any comprehensive coding compliance system. The key features are:

- Provide for 100 percent computerized audit of all records
- Evaluate coding compliance from a coding, clinical, and resource perspective as well as based on user defined criteria
- Emphasize correct-coding and not just over-coding
- Produce a worksheet that clearly specifies the nature of any coding compliance problems and suggested coding changes
- Prioritize records with potential coding compliance problems
- Minimize the occurrence of false positives and false negatives in the computerized audit
- Maintain a detailed audit trail with original, billed, and post billed copies of the record
- Provide comparisons to external norms
- Support alternative workflows
- Interface to hospital encoder and abstract systems

While the focus of this discussion has been on inpatient coding compliance, the general issues and conclusions apply equally to outpatient coding.

Conclusions

Implementing a comprehensive coding compliance system can have many direct and indirect benefits, including:

- Meeting coding compliance requirements
- Reducing the need to add additional staff
- Reducing the chance of triple damages penalties
- Reducing billing delays
- Avoiding bill resubmissions
- Reducing the tendency to code defensively
- Correcting both over and under coding
- Improving performance on severity adjusted provider report cards

Thus, the implementation of a comprehensive coding compliance system need not be a financial burden on hospitals. Implemented correctly, the positive benefits of a coding compliance system can far outweigh the cost of its implementation.

References

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